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(54) PREFERENCE STATISTIC PROGRAM RETRIEVAL TELEVISION SYSTEM

(57)Abstract:

PROBLEM TO BE SOLVED: To aid the selection of a television program by the user by displaying a list of television programs in matching with the preference of the user. SOLUTION: A preference statistic data generating means 21 uses a channel selected by the user, a current time and television program data 11 to acquire program information of television programs and to generate preference statistic data 12 for selecting the television program by the user. A preference program detection means 22 retrieves a television program in matching with the preference of the user from the television program data 11 based on the television program selection preference statistic data 12. A keyword detection means 23 receives a keyword from the user and retrieves a television program in matching with the keyword from the television program data 11.

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CLAIMS

[Claim(s)]

[Claim 1] The taste statistics television system characterized by including a taste statistics data origination means to acquire the program information on a TV program using the channel, current time, and TV program data which the user chose, and to create the taste statistical data of TV program selection of a user.

[Claim 2] The program retrieval television system characterized by including a taste program detection means to search the TV program which suits a user's taste from TV program data based on the taste statistical data of TV program selection of a user.

[Claim 3] The program retrieval television system characterized by including a keyword detection means to search from a user the TV program which suits a keyword from reception and TV program data in a keyword.

[Claim 4] The taste statistics program retrieval television system characterized by to include a taste statistics data origination means acquires the program information on a TV program using the channel, current time, and TV program data which the user chose, and create the taste statistical data of TV program selection of a user, and a taste program detection means search the TV program which suits a user's taste from TV program data based on the taste statistical data of TV program selection of a user.

[Claim 5] A taste statistics data origination means to acquire the program information on a TV program using the channel, current time, and TV program data which the user chose, and to create the taste statistical data of TV program selection of a user, A taste program detection means to search the TV program which suits a user's taste from TV program data based on the taste statistical data of TV program selection of a user, The taste statistics program retrieval television system characterized by including a keyword detection means to search from a user the TV program which suits a keyword from reception and TV program data in a keyword.

[Claim 6] The program retrieval television system which is equipped with a taste program detection means to search a TV program from TV program data, and is characterized by including a means to access the program information on the target TV program from the list of the searched TV programs.

[Claim 7] The program retrieval television system which is equipped with a taste program detection means to search a TV program from TV program data, and is characterized by including the means which can make image transcription reservation of a videocassette recorder from the list of the searched TV programs.

[Claim 8] The record medium characterized by recording the program for making it operate as a taste statistics data origination means to acquire the program information on a TV program using the channel, current time, and TV program data with which the user chose the computer, and to create the taste statistical data of TV program selection of a user.

[Claim 9] The record medium characterized by recording the program for making it operate as a taste program detection means to search the TV program which suits a user's taste from TV program data based on the taste statistical data of TV program selection of a computer of a user.

[Claim 10] The record medium characterized by recording the program for making it operate as a keyword detection means to search the TV program which suits [computer] a keyword from reception and TV program data in a user to a keyword.

[Claim 11] The record medium characterized by to record the program for making it function as a taste statistics data-origination means acquires the program information on a TV program using the channel, the current time, and the TV program data with which the user chose the computer, and create the taste statistical data of TV program selection of a user, and a taste program detection means search the TV program which suits a user's taste from TV program data based on the taste statistical data of TV program selection of a user.

[Claim 12] The program information on a TV program is acquired using the channel, current time, and TV program data with which the user chose the computer. A keyword from a taste statistics data origination means to create the taste statistical data of TV program selection of a user, a taste program detection means to search the TV program which suits a user's taste from TV program data based on the taste statistical data of TV program selection of a user, and a user Reception, The record medium characterized by recording the program for making it function as a keyword detection means to search the TV program which suits a keyword from TV program data.

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the taste statistics program retrieval television system which performs retrieval of a TV program, and acquisition of program information especially about the taste statistics program retrieval television system containing a television receiver (only henceforth television).

[0002]

[Description of the Prior Art] Conventionally, the approach and system which choose this kind of TV program efficiently aim at searching efficiently the TV program to which a user wants to view and listen, and choosing it from two or more TV programs, when viewing and listening to a TV program. An example of the approach of choosing the conventional TV program efficiently or a system is indicated by JP,8-51595,A. The approach of choosing efficiently the TV program indicated by this official report and a system are for supporting so that it can examine efficiently which TV program a user views, listens to or records, and they are constituted by television as an indicating equipment of a TV program and a television schedule, the video as a TV program recording apparatus, and the computer that creates a schedule layout. The program table and the selection program which records the TV program which the user chose before are prepared for the computer. When a user chooses a TV program, not only text description of the TV program chosen by the user but both graphic description is displayed with a schedule layout, and the user enables it to choose quickly the TV program viewed, listened to which or recorded.

[0003]

[Problem(s) to be Solved by the Invention] The 1st trouble is needing much an effort and time amount, although the TV program to which a user's wants to view and listen is chosen in the approach of supporting the conventional TV program selection, or a system. The reason is that many time amount and efforts are applied to selection of a TV program in order to choose from the whole genre every one TV program which suited a user's taste, even if the genre out of the TV program of all genres was decided.

[0004] The 2nd trouble is overlooking the TV program to which a user's may view and listen by the TV program (henceforth a new program) started newly in the approach of supporting the conventional TV program selection, or a system. The reason is for not performing selecting the new TV program planned in the future according to a user's taste.

[0005] The object of this invention displays the list of the TV programs which suited a user's taste, and is to offer the taste statistics program retrieval television system which supports selection of a user's TV program.

[0006] Moreover, other objects of this invention are selecting the TV program which suited a user's taste out of the new TV program planned in the future, and notifying a

user, and are to offer the taste statistics program retrieval television system which makes low possibility of overlooking a new program.

[0007]

[Means for Solving the Problem] The taste statistics television system of this invention acquires the program information on a TV program using the channel, current time, and TV program data which the user chose, and is characterized by including a taste statistics data origination means to create the taste statistical data of TV program selection of a user.

[0008] Moreover, the program retrieval television system of this invention is characterized by including a taste program detection means to search the TV program which suits a user's taste from TV program data based on the taste statistical data of TV program selection of a user.

[0009] Furthermore, the program retrieval television system of this invention is characterized by including a keyword detection means to search from a user the TV program which suits a keyword from reception and TV program data in a keyword.

[0010] The taste statistics program retrieval television system of this invention acquires the program information on a TV program using the channel, the current time, and the TV program data which the user chose, and is characterized by to include a taste statistics data origination means create the taste statistical data of TV program selection of a user, and a taste program detection means search the TV program which suits a user's taste from TV program data based on the taste statistical data of TV program selection of a user further again.

[0011] Moreover, the taste statistics program retrieval television system of this invention A taste statistics data origination means to acquire the program information on a TV program using the channel, current time, and TV program data which the user chose, and to create the taste statistical data of TV program selection of a user, A taste program detection means to search the TV program which suits a user's taste from TV program data based on the taste statistical data of TV program selection of a user, It is characterized by including a keyword detection means to search from a user the TV program which suits a keyword from reception and TV program data in a keyword.

[0012] Furthermore, the program retrieval television system of this invention is equipped with a taste program detection means to search a TV program from TV program data, and is characterized by including a means to access the program information on the target TV program, from the list of the searched TV programs.

[0013] The program retrieval television system of this invention is equipped with a taste program detection means to search a TV program from TV program data, and is characterized by including the means which can make image transcription reservation of a videocassette recorder from the list of the searched TV programs further again.

[0014] On the other hand, the record medium of this invention acquires the program information on a TV program using the channel, current time, and TV program data

with which the user chose the computer, and is characterized by recording the program for making it operate as a taste statistics data origination means to create the taste statistical data of TV program selection of a user.

[0015] Moreover, the record medium of this invention is characterized by recording the program for making it operate as a taste program detection means to search the TV program which suits a user's taste from TV program data based on the taste statistical data of TV program selection of a computer of a user.

[0016] Furthermore, the record medium of this invention is characterized by recording the program for making it operate as a keyword detection means to search the TV program which suits [computer] a keyword from reception and TV program data in a user to a keyword.

[0017] The record medium of this invention acquires the program information on a TV program using the channel, the current time, and the TV program data with which a user chose a computer, and is characterized by to record the program for making it function as a taste statistics data-origination means create the taste statistical data of TV program selection of a user, and a taste program detection means search the TV program which suits a user's taste from TV program data based on the taste statistical data of TV program selection of a user further again.

[0018] Moreover, the record medium of this invention acquires the program information on a TV program using the channel, current time, and TV program data with which the user chose the computer. A keyword from a taste statistics data origination means to create the taste statistical data of TV program selection of a user, a taste program detection means to search the TV program which suits a user's taste from TV program data based on the taste statistical data of TV program selection of a user, and a user Reception, It is characterized by recording the program for making it function as a keyword detection means to search the TV program which suits a keyword from TV program data.

[0019]

[Embodiment of the Invention] Hereafter, the gestalt of operation of this invention is explained to a detail with reference to a drawing.

[0020] Drawing 1 is the block diagram showing the configuration of the taste statistics program retrieval television system concerning the gestalt of operation of the 1st of this invention. The taste statistics program retrieval television system concerning the gestalt of this operation is constituted including a store 1, a data processor 2, an input device 3, an image and a speech processing unit 4, the output unit (television) 5, the antenna 6, and the tuner 7.

[0021] A store 1 is equipped with the TV program data 11 and the taste statistical data 12.

[0022] The TV program data 11 include program information, such as start time, end time, a televising channel, a genre, a performer, and supervising, for every TV program.

[0023] The data created by the taste statistics data origination means 21 from the

TV program in which the user chose, and viewed and listened to the taste statistical data 12 are saved.

[0024] A data processor 2 is equipped with the taste statistics data origination means 21, the taste program detection means 22, and the keyword detection means 23.

[0025] The taste statistics data origination means 21 acquires the program information on a TV program that the TV program data 11 to the user chose reception, its channel, and current time for the channel inputted into the image and the speech processing unit 4 at the key from an input device 3. Moreover, the taste statistics data origination means 21 selects data out of the acquired program information for every keywords, such as a genre, a performer, and supervising, and reflects the content in the taste statistical data 12. There is a method of incrementing as an easy approach of reflecting, whenever the counter of each data is chosen for every keyword. A user's created data are saved at the taste statistical data 12. Moreover, if the program information on the TV program chosen now acquired by the taste statistics data origination means 21 has a demand from an input device 3, it can also be displayed on the child screen of a picture Inn picture (henceforth PinP).

[0026] The taste program detection means 22 is started when there is a taste program detection demand from an input device 3, and it detects the list of the TV programs which suited a user's taste from the TV program data 11 based on the taste statistical data 12. The detected result is passed to an image and a speech processing unit 4, and is displayed on an output unit 5. A list is displayed on the whole screen or the child screen of PinP. The method of a display is directed with an input unit 3, and is processed by an image and the speech processing unit 4.

[0027] The keyword detection means 23 carries out the direct input of the keyword from an input device 3, and acquires the list of the target TV programs, or the program information on a TV program from the TV program data 11.

[0028] If drawing 2 refers to, processing of the taste statistics program retrieval television system concerning the gestalt of the 1st operation will become from the input step A1, the taste program detection demand judging step A2, taste program detection means execute-step A3, keyword detection demand judging step A4, keyword detection means execute-step A5, a channel selection carbon button judging step A6, a taste statistics data-origination means execute step A7, and an assignment channel display step A8.

[0029] If drawing 3 is referred to, processing of the taste program detection means 22 will consist of the taste statistical-data reading step A11, the TV program data retrieval step A12, the taste condition agreement TV program existence judging step A13, the keyword modification step A14, the taste condition agreement TV program list display step A15, the TV program selection step A16, the program information-display judging step A17, a program information-display step A18, and a selection TV program O.K. judging step A19.

[0030] If drawing 4 is referred to, processing of the keyword detection means 23 will consist of the TV program data retrieval step A21, the keyword agreement TV program existence judging step A22, the keyword reinput step A23, the keyword agreement TV program list display step A24, the keyword reinput judging step A25, the TV program selection step A26, the program information-display step A27, a program information-display step A28, and a selection TV program O.K. judging step A29.

[0031] If drawing 5 is referred to, processing of the taste statistics data origination means 21 will consist of the current time acquisition step A31, the program information retrieval step A32, the taste statistical-data reflection step A33, a program information-display judging step A34, and a program information-display step A35.

[0032] Next, actuation of the taste statistics program retrieval television system concerning the gestalt of the 1st operation constituted in this way is explained.

[0033] (1) The specified channel is passed to the taste statistics data origination means 21, and an image and a speech processing unit 4 when a channel selection carbon button is pushed from an input device 3 (it is yes at step A6) (steps A7 and A8).

[0034] An image and a speech processing unit 4 display the passed channel on an output unit 5 (step A8).

[0035] The taste statistics data origination means 21 acquires current time (step A31), and the program information on a TV program that the user chose current time and a channel as the key from the television number data 11 is acquired (step A32). Next, the taste statistics data origination means 21 reflects the program information on the acquired TV program in the taste statistical data 12 (step A33). If there is a demand so that the program information on the TV program chosen from the user may be displayed at this time (it is yes at step A34), the taste statistics data origination means 21 will display the program information on the acquired TV program on an output unit 5 with an image and a speech processing unit 4 (step A35).

[0036] (2) When there is a taste program detection demand from an input unit 3 (it is yes at step A2), perform the taste program detection means 22 (step A3).

[0037] The taste program detection means 22 reads the taste statistical data 12 (step A11), and searches the TV program data 11 with a keyword with the high selection frequency in the taste statistical data 12 (step A12). When the TV program suitable for taste conditions is not found in retrieval, at the (step A13, no-) and the taste program detection means 22 change a keyword (step A14), and redo retrieval again (step A12). When the TV program suitable for taste conditions is found, yes) and the taste program detection means 22 display the list on an output unit 5 with an image and a speech processing unit 4 at the (step A13 (step A15). Next, if the taste program detection means 22 has a program information display request from a user when a user chooses a TV program from lists using an input device 3 (step A16) (it is

yes at step A17), the program information on the TV program will be displayed on an output unit 5 with an image and a speech processing unit 4 (step A18). When viewing and listening to the selected TV program, yes) and the taste program detection means 22 end processing at the (step A19, and when rechoosing, a TV program is re(step A16) chosen from no-) and a list at the (step A19).

[0038] (3) When there is a keyword detection demand from an input unit 3 (it is yes at step A4), perform the keyword detection means 23 (step A5).

[0039] The keyword detection means 23 searches the TV program data 11 with the keyword inputted from the input device 3 (step A21). When the TV program suitable for a keyword is not found (it is no at step A22), the keyword detection means 23 makes the keyword from an input unit 3 reinput to a user (step A23), and redoes retrieval of the TV program by the keyword (step A21). When the TV program suitable for a keyword is found (it is yes at step A22), the keyword detection means 23 displays the list on an output unit 5 with an image and a speech processing unit 4 (step A24). Next, if the keyword detection means 23 has a program information display request from a user when a user chooses a TV program from lists using an input device 3 (step A26) (it is yes at step A27), the program information on the TV program will be displayed on an output unit 5 with an image and a speech processing unit 4 (step A28). When viewing and listening to the selected TV program, yes) and the keyword detection means 23 end processing at the (step A29, and when rechoosing, a TV program is re(step A26) chosen from no-) and a list at the (step A29. the case where change a keyword and it researches in that case -- (— step A25 — yes —) — the keyword detection means 23 makes a keyword reinput from an input unit 3 to a user (step A23), and redoes retrieval of the TV program by the keyword (step A21).

[0040] Drawing 6 is drawing showing an example of the menu screen in the case of searching a TV program. When searching a TV program with the taste program detection means 22 and the keyword detection means 23, this menu screen is used (step A3 and A5). In the case of the taste program detection means 22, the keyword searched from the retrieval keyword carbon button 101 is chosen. If the retrieval keyword carbon button 101 is pushed, it outputs to the keyword input screen 121 which shows the candidate for [which suited the keyword from the taste statistical data 12] retrieval to drawing 7 , and a user will move a selection bar 123, will choose what to search out of it, and will perform a search.

[0041] The searched result is displayed on the list screen 103. The genre 111, the channel 112, the start time 113, the end time 114, the program name 115, and classification 116 of the TV program which it was searched and was found are displayed on the list screen 103. Marks, such as stereophonic broadcasting, bilingual broadcast, and re-broadcast, go into classification 116. A user pushes the television display carbon button 106, when moving a selection bar 105 and viewing and listening to the TV program. However, only the case where current televising of the TV

program is carried out can view and listen. In order to obtain the detailed information of the selected TV program, the program detailed information display carbon button 107 is pushed. When ending a menu, the termination carbon button 108 is pushed.

[0042] In the case of the keyword detection means 23, the keyword input carbon button 102 is pushed, it moves to the KIWADO input screen 121, and a keyword is inputted, and it performs a search. The actuation after searching is the same as the case of the taste program detection means 22.

[0043] The description of the taste statistics program retrieval television system concerning the gestalt of the 1st operation is the point which can notify a user of the program information on a TV program which suited a user's taste by analyzing a user's taste. The displayed list is linked to the program information on each TV program of TV program data, and a user can access the program information on the TV program to choose quickly, and can examine the TV program viewed, listened to which or recorded based on the data. Thereby, the time and effort which searches and examines the TV program to which a user views and listens is simplified.

[0044] Moreover, since detection of the TV program which suited a user's taste will also become possible out of the new program of an initiation schedule in the future, a user can be notified of what suited a user's taste out of the new program, and possibility that a user will overlook a new program can be made low.

[0045] Next, the gestalt of operation of the 2nd of this invention is explained to a detail with reference to a drawing.

[0046] ** [reference of drawing 8 / differ / in that the videocassette recorder 8 is added / it / to the taste statistics program retrieval television system concerning the gestalt of the 1st operation with which the taste statistics program retrieval television system concerning the gestalt of operation of the 2nd of this invention was shown in drawing 1] In addition, since other means, equipment, etc. are constituted completely like a means in the taste statistics program retrieval television system concerning the gestalt of the 1st operation to correspond, equipment, etc., the same sign is given to a corresponding means and equipment, and those detailed explanation is omitted.

[0047] A videocassette recorder 8 performs reception and image transcription reservation of the TV program for the program information on the TV program detected and chosen with the taste program detection means 22 and the keyword detection means 23.

[0048] If drawing 9 is referred to, the selection TV program image transcription reservation judging step B1 and videocassette recorder image transcription reservation step B-2 are made for processing of the taste statistics program retrieval television system concerning the gestalt of the 2nd operation to add to processing of the taste statistics program retrieval television system concerning the gestalt of the 1st operation shown in drawing 2 .

[0049] Next, actuation of the taste statistics program retrieval television system concerning the gestalt of the 2nd operation constituted in this way is explained.

[0050] Since actuation of the taste program detection means 22 shown in step aluminum thru/or actuation of A8, step A3, and A5 of drawing 9 and the keyword detection means 23 is completely the same as actuation of the gestalt of the 1st operation, those detailed explanation is omitted.

[0051] It is made the TV program detected with a taste program detection means 22 and a keyword detection means 23 at the taste statistics program retrieval television system which relates to the gestalt of the 2nd operation although the program information was not anywhere harnessed if the TV program was not broadcast now even if it chose the TV program with the taste program detection means 22 and the keyword detection means 23 in the taste statistics program retrieval television system concerning the gestalt of the 1st operation being able to carry out on that spot image transcription reservation. That is, after activation of the taste program detection means 22 and the keyword detection means 23 (step A3 and A5), if there is image transcription reservation of the TV program chosen from the user (it is yes at step B1), the videocassette recorder 8 is performing image transcription reservation of a TV program (step B-2). For this reason, a videocassette recorder 8 will start an image transcription automatically according to the televising channel of this TV program, if the start time of the TV program by which image transcription reservation was carried out comes, and if end time comes, it will end an image transcription automatically.

[0052] Drawing 10 is drawing showing an example of the menu screen displayed as a result of referring to the taste program detection means 22 and the keyword detection means 23. In this menu screen, when the program image transcription reservation carbon button 109 is pushed, the image transcription reservation screen shown in drawing 11 comes out. Although the program information displayed on the program information-display section 201 of this image transcription reservation screen is the same as the program information and the basic target which are chosen with the selection bar 105 in drawing 10, when it is the TV program of the continuous series thing, a display called continuation and the display of the count of all are added. A user chooses from the reservation menu 202 how it reserves, when reserving, whether image transcription reservation is performed and.

[0053] By the taste statistics program retrieval television system concerning the gestalt of the 2nd operation, even if the TV program searched and chosen will be the thing of a televising schedule in the future, possibility of overlooking the TV program by carrying out image transcription reservation to a videocassette recorder 8 can be made low.

[0054] Next, the gestalt of operation of the 3rd of this invention is explained with reference to a drawing.

[0055] If drawing 12 is referred to, the record medium 9 recorded the taste statistics data origination program, the taste program detection program, and the keyword detection program is made for the taste statistics program retrieval television system

concerning the gestalt of operation of the 3rd of this invention to have to the taste statistics program retrieval television system concerning the gestalt of the 1st operation. A record medium 9 may be a record medium of a magnetic disk, semiconductor memory, and others.

[0056] A taste statistics data origination program, a taste program detection program, and a keyword detection program are read into a data processor 2 from a record medium 9, and control actuation of a data processor 2 as the taste statistics data origination means 21, the taste program detection means 22, and a keyword detection means 23. Therefore, since actuation of the taste statistics program retrieval television system concerning the gestalt of the 3rd operation becomes being completely the same as that of actuation of the taste statistics program retrieval television system concerning the gestalt of the 1st operation, it omits the detailed explanation.

[0057] Next, the gestalt of operation of the 4th of this invention is explained with reference to a drawing.

[0058] If drawing 13 is referred to, the record medium 9 recorded the taste statistics data origination program, the taste program detection program, and the keyword detection program is made for the taste statistics program retrieval television system concerning the gestalt of operation of the 4th of this invention to have to the taste statistics program retrieval television system concerning the gestalt of the 2nd operation. A record medium 9 may be a record medium of a magnetic disk, semiconductor memory, and others.

[0059] A taste statistics data origination program, a taste program detection program, and a keyword detection program are read into a data processor 2 from a record medium 9, and control actuation of a data processor 2 as the taste statistics data origination means 21, the taste program detection means 22, and a keyword detection means 23. Therefore, since actuation of the taste statistics program retrieval television system concerning the gestalt of the 4th operation becomes being completely the same as that of actuation of the taste statistics program retrieval television system concerning the gestalt of the 2nd operation, it omits the detailed explanation.

[0060]

[Effect of the Invention] The 1st effectiveness is being able to search quickly the TV program to which a user's wants to view and listen. In case the reason chooses a TV program, it is for extracting and searching a keyword according to a user's taste.

[0061] The 2nd effectiveness is being able to make low possibility of overlooking the new program to which the user's will view and listen. The reason is because a TV program is searched according to a user's taste also about the TV program of the schedule broadcast in the future, a user is notified of it and image transcription reservation of a videocassette recorder can be made further on that spot.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the block diagram showing the configuration of the taste statistics program retrieval television system concerning the gestalt of operation of the 1st of this invention.

[Drawing 2] It is the flow chart which shows processing of the taste statistics program retrieval television system concerning the gestalt of the 1st operation.

[Drawing 3] It is the flow chart which shows processing of the taste program detection means in drawing 1 .

[Drawing 4] It is the flow chart which shows processing of the keyword detection means in drawing 1 .

[Drawing 5] It is the flow chart which shows processing of the taste statistics data origination means in drawing 1 .

[Drawing 6] It is drawing showing an example of the menu screen in the case of searching the TV program in the taste statistics program retrieval television system concerning the gestalt of the 1st operation.

[Drawing 7] It is drawing showing an example of the keyword input screen in the case of searching the TV program in the taste statistics program retrieval television system concerning the gestalt of the 1st operation.

[Drawing 8] It is the block diagram showing the configuration of the taste statistics program retrieval television system concerning the gestalt of operation of the 2nd of this invention.

[Drawing 9] It is the flow chart which shows processing of the taste statistics program retrieval television system concerning the gestalt of the 2nd operation.

[Drawing 10] It is drawing showing an example of the menu screen in the case of searching the TV program in the taste statistics program retrieval television system concerning the gestalt of the 2nd operation.

[Drawing 11] It is drawing showing an example of the image transcription reservation screen in the case of searching the TV program in the taste statistics program retrieval television system concerning the gestalt of the 2nd operation.

[Drawing 12] It is the block diagram showing the configuration of the taste statistics program retrieval television system concerning the gestalt of operation of the 3rd of this invention.

[Drawing 13] It is the block diagram showing the configuration of the taste statistics program retrieval television system concerning the gestalt of operation of the 4th of this invention.

[Description of Notations]

- 1 Storage
 - 2 Data Processor
 - 3 Input Unit
 - 4 Image and Speech Processing Unit
 - 5 Output Unit (Television)
 - 6 Antenna
 - 7 Tuner
 - 8 Videocassette Recorder
 - 9 Record Medium
 - 11 TV Program Data
 - 12 Taste Statistical Data
 - 21 Taste Statistics Data Origination Means
 - 22 Taste Program Detection Means
 - 23 Keyword Detection Means
 - 101 Retrieval Keyword Carbon Button
 - 102 Keyword Input Carbon Button
 - 103 List Screen
 - 105 Selection Bar
 - 106 Television Display Carbon Button
 - 107 Program Detailed Information Display Carbon Button
 - 108 Termination Carbon Button
 - 109 Program Image Transcription Reservation Carbon Button
 - 111 Genre
 - 112 Channel
 - 113 Start Time
 - 114 End Time
 - 115 Program Name
 - 116 Classification
 - 121 Keyword Input Screen
 - 123 Selection Bar
 - 201 Program Reservation Display
 - 202 Reservation Menu
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